

Representing Situations

Review It!

When you represent situations, translate key words into symbols for operations:

addition sum, increase, more than

subtraction difference, decrease, less than

multiplication product, times, double

division quotient, divided by, equal groups

What is a math sentence for the following word sentence?
The product of 3 and the sum of a number and 2 is 27.

Step 1 Look for key words. THINK "Sum" means *add*.

The product of 3 and the sum of a number and 2 is 27. THINK "is" means *equals*.

Step 2 Translate each word expression. THINK "Product" means *multiply*.

Write "sum of a number and 2" as $n + 2$.

Write "product of 3 and the sum" as $3 \times$ sum.

Write "equals" as $=$.

Step 3 Put the expressions together. $3 \times (n + 2) = 27$

So, the math expression for "the product of 3 and the sum of a number and 2 is 27" is _____ or $3(n + 2) = 27$.

Try It!

Write a math equation for each word sentence. Use n for "a number."



1. Ten more than a number is 23. _____
2. Eight less than a number is 15. _____
3. Five times a number equals 45. _____
4. A number divided by 7 is 13. _____
5. Three less than the product of a number and 4 is 33. _____
6. Nine less than the quotient of a number and 5 is 18. _____
7. Fifteen less than twice a number is 11. _____
8. Nine more than a number divided by 16 is 15. _____
9. Fifteen more than 8 times a number is 39. _____
10. Two times the sum of a number and 6 is 26. _____
11. Five times the difference of a number and 3 is 20. _____

1. What does "more than" mean? add, or subtract?

2. What does "less than" mean? add, or subtract?

Solve.

12. Martha took \$50 to the grocery store. She spent d dollars for groceries, and had \$6 left. Write a math equation for the situation. _____
13. Yan bought a bag of oranges for \$6.30. The oranges cost \$0.55 per pound, p . Write a math equation for the situation. _____

12. What does "spent" mean? add, or subtract?



On Your Own!

Circle the best answer for each question.

In questions 1-4, find the math expression that models the word expression.

- the product of a number and 7
 - $n + 7$
 - $7n$
 - $n \div 7$
 - $n - 7$
- ten less than a number
 - $n + 10$
 - $10n$
 - $n - 10$
 - $10 - n$
- five more than the product of a number and 12
 - $12n + 5$
 - $n \div 12 + 5$
 - $5n + 7$
 - $12n - 5$
- Scott's mother baked n cookies. She divided them equally among her 4 children. Scott ate 2 of his cookies.
 - $4n - 2$
 - $n \div 2 - 4$
 - $n \div 4 + 2$
 - $n \div 4 - 2$

In questions 5-8, find the math sentence that models the word sentence.

- Six more than a number is 24.
 - $6n = 24$
 - $n + 24 = 6$
 - $n - 6 = 24$
 - $n + 6 = 24$
- Eight less than 3 times a number is 7.
 - $n \div 8 - 3 = 7$
 - $3n + 8 = 7$
 - $3n - 8 = 7$
 - $8n - 3 = 7$
- Twelve less than the quotient of a number and 2 is 10.
 - $n \div 12 - 2 = 10$
 - $n \div 2 - 12 = 10$
 - $2n - 12 = 10$
 - $n \div 2 + 12 = 10$
- Nancy read n pages each day. Katy read 3 more pages than Nancy. Katy read 48 pages in 6 days.
 - $6(n + 3) = 48$
 - $6n + 3 = 48$
 - $6(n - 3) = 48$
 - $3(n + 6) = 48$

- Gina took \$85 to buy groceries. She spent d dollars at the store. When she got home she had \$13. Write a math sentence for the situation.

- Paul earns \$9 per hour. He wants to know how much he can earn in h hours. Write a math expression for the situation.

Math Words

Fill in the blanks.

- The word "sum" means _____
- The word "product" means _____
- The word "decrease" means _____
- The word "quotient" means _____